

# Frederik J Tilmann

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

109  
papers

3,370  
citations

32  
h-index

55  
g-index

158  
ext. papers

3,971  
ext. citations

4.9  
avg, IF

5.04  
L-index

#	Paper	IF	Citations
109	Fibre optic distributed acoustic sensing of volcanic events.. <i>Nature Communications</i> , <b>2022</b> , 13, 1753	17.4	5
108	Continental Break-Up Under a Convergent Setting: Insights From P Wave Radial Anisotropy Tomography of the Woodlark Rift in Papua New Guinea. <i>Geophysical Research Letters</i> , <b>2022</b> , 49,	4.9	1
107	Impact of the Juan Fernandez Ridge on the Pampean Flat Subduction Inferred From Full Waveform Inversion. <i>Geophysical Research Letters</i> , <b>2021</b> , 48, e2021GL095509	4.9	0
106	Imaging the Ethiopian Rift Region Using Transdimensional Hierarchical Seismic Noise Tomography. <i>Pure and Applied Geophysics</i> , <b>2021</b> , 178, 4367	2.2	0
105	The transformer earthquake alerting model: a new versatile approach to earthquake early warning. <i>Geophysical Journal International</i> , <b>2021</b> , 225, 646-656	2.6	8
104	Earthquake magnitude and location estimation from real time seismic waveforms with a transformer network. <i>Geophysical Journal International</i> , <b>2021</b> , 226, 1086-1104	2.6	5
103	ScanArray <sup>2</sup> Broadband Seismological Experiment in the Baltic Shield. <i>Seismological Research Letters</i> , <b>2021</b> , 92, 2811-2823	3	3
102	Seismic anisotropy and mantle deformation in NW Iran inferred from splitting measurements of SK(K)S and direct S phases. <i>Geophysical Journal International</i> , <b>2021</b> , 226, 1417-1431	2.6	2
101	Full Waveform Inversion Beneath the Central Andes: Insight Into the Dehydration of the Nazca Slab and Delamination of the Back-Arc Lithosphere. <i>Journal of Geophysical Research: Solid Earth</i> , <b>2021</b> , 126, e2021JB021984	3.6	3
100	Comment on Potential short-term earthquake forecasting by farm animal monitoring by Wikelski, Mueller, Scocco, Catorci, Desinov, Belyaev, Keim, Pohlmeier, Fechteler, and Mai. <i>Ethology</i> , <b>2021</b> , 127, 302-306	1.7	1
99	The GEOFON Program in 2020. <i>Seismological Research Letters</i> , <b>2021</b> , 92, 1610-1622	3	4
98	The SWATH-D Seismological Network in the Eastern Alps. <i>Seismological Research Letters</i> , <b>2021</b> , 92, 1592-1609	3.609	6
97	Joint ambient noise autocorrelation and receiver function analysis of the Moho. <i>Geophysical Journal International</i> , <b>2021</b> , 225, 1920-1934	2.6	1
96	Shear wave splitting in the Alpine region. <i>Geophysical Journal International</i> , <b>2021</b> , 227, 1996-2015	2.6	3
95	Seismic structure across central Myanmar from joint inversion of receiver functions and Rayleigh wave dispersion. <i>Tectonophysics</i> , <b>2021</b> , 818, 229068	3.1	1
94	Crustal Structure of Sri Lanka Derived From Joint Inversion of Surface Wave Dispersion and Receiver Functions Using a Bayesian Approach. <i>Journal of Geophysical Research: Solid Earth</i> , <b>2020</b> , 125, e2019JB018688	3.6	6
93	P Wave Anisotropy Caused by Partial Eclogitization of Descending Crust Demonstrated by Modeling Effective Petrophysical Properties. <i>Geochemistry, Geophysics, Geosystems</i> , <b>2020</b> , 21, e2019GC008906	2.6	2

92	Another look at the treatment of data uncertainty in Markov chain Monte Carlo inversion and other probabilistic methods. <i>Geophysical Journal International</i> , <b>2020</b> , 222, 388-405	2.6	4
91	Magmatic and Sedimentary Structure beneath the Klyuchevskoy Volcanic Group, Kamchatka, From Ambient Noise Tomography. <i>Journal of Geophysical Research: Solid Earth</i> , <b>2020</b> , 125, e2019JB018900	3.6	14
90	Velocity structure and radial anisotropy of the lithosphere in southern Madagascar from surface wave dispersion. <i>Geophysical Journal International</i> , <b>2020</b> , 224, 1930-1944	2.6	1
89	Anomalous azimuthal variations with 360° periodicity of Rayleigh phase velocities observed in Scandinavia. <i>Geophysical Journal International</i> , <b>2020</b> , 224, 1684-1704	2.6	3
88	Low uncertainty multifeature magnitude estimation with 3-D corrections and boosting tree regression: application to North Chile. <i>Geophysical Journal International</i> , <b>2020</b> , 220, 142-159	2.6	6
87	Seismic velocity and anisotropy of the uppermost mantle beneath Madagascar from Pn tomography. <i>Geophysical Journal International</i> , <b>2020</b> , 224, 290-305	2.6	1
86	Role of Serpentinized Mantle Wedge in Affecting Megathrust Seismogenic Behavior in the Area of the 2010 M = 8.8 Maule Earthquake. <i>Geophysical Research Letters</i> , <b>2020</b> , 47, e2020GL090482	4.9	7
85	Complex hazard cascade culminating in the Anak Krakatau sector collapse. <i>Nature Communications</i> , <b>2019</b> , 10, 4339	17.4	67
84	Receiver-function imaging of the lithosphere at the Kunlun-Qaidam boundary, Northeast Tibet. <i>Tectonophysics</i> , <b>2019</b> , 759, 30-43	3.1	5
83	The Interplay of Eclogitization and Deformation During Deep Burial of the Lower Continental Crust: A Case Study From the Bergen Arcs (Western Norway). <i>Tectonics</i> , <b>2019</b> , 38, 898-915	4.3	11
82	The Crust in the Pamir: Insights From Receiver Functions. <i>Journal of Geophysical Research: Solid Earth</i> , <b>2019</b> , 124, 9313-9331	3.6	21
81	SMART Cables for Observing the Global Ocean: Science and Implementation. <i>Frontiers in Marine Science</i> , <b>2019</b> , 6,	4.5	28
80	Modification of the Seismic Properties of Subducting Continental Crust by Eclogitization and Deformation Processes. <i>Journal of Geophysical Research: Solid Earth</i> , <b>2019</b> , 124, 9731-9754	3.6	9
79	Probing the Northern Chile Megathrust With Seismicity: The 2014 M8.1 Iquique Earthquake Sequence. <i>Journal of Geophysical Research: Solid Earth</i> , <b>2019</b> , 124, 12935-12954	3.6	10
78	P Wave Azimuthal Anisotropic Tomography in Northern Chile: Insight Into Deformation in the Subduction Zone. <i>Journal of Geophysical Research: Solid Earth</i> , <b>2019</b> , 124, 742-765	3.6	8
77	The AlpArray Seismic Network: A Large-Scale European Experiment to Image the Alpine Orogen. <i>Surveys in Geophysics</i> , <b>2018</b> , 39, 1009-1033	7.6	79
76	Estimating Rupture Directions from Local Earthquake Data Using the IPOC Observatory in Northern Chile. <i>Seismological Research Letters</i> , <b>2018</b> , 89, 495-502	3	4
75	Crustal Radial Anisotropy and Linkage to Geodynamic Processes: A Study Based on Seismic Ambient Noise in Southern Madagascar. <i>Journal of Geophysical Research: Solid Earth</i> , <b>2018</b> , 123, 5130-5146	3.6	12

74	Seismic Anisotropy Beneath the Pamir and the Hindu Kush: Evidence for Contributions From Crust, Mantle Lithosphere, and Asthenosphere. <i>Journal of Geophysical Research: Solid Earth</i> , <b>2018</b> , 123, 10,727	3.6	7
73	Structure of the central Sumatran subduction zone revealed by local earthquake travel-time tomography using an amphibious network. <i>Solid Earth</i> , <b>2018</b> , 9, 1035-1049	3.3	9
72	Crustal structure of southern Madagascar from receiver functions and ambient noise correlation: Implications for crustal evolution. <i>Journal of Geophysical Research: Solid Earth</i> , <b>2017</b> , 122, 1179-1197	3.6	20
71	Insight into NE Tibetan Plateau expansion from crustal and upper mantle anisotropy revealed by shear-wave splitting. <i>Earth and Planetary Science Letters</i> , <b>2017</b> , 478, 66-75	5.3	34
70	The structure of the crust and uppermost mantle beneath Madagascar. <i>Geophysical Journal International</i> , <b>2017</b> , 210, 1525-1544	2.6	25
69	Revision of earthquake hypocentre locations in global bulletin data sets using source-specific station terms. <i>Geophysical Journal International</i> , <b>2017</b> , 208, 589-602	2.6	7
68	Commercial Underwater Cable Systems Could Reduce Disaster Impact. <i>Eos</i> , <b>2017</b> ,	1.5	5
67	Investigation of mantle kinematics beneath the Hellenic-subduction zone with teleseismic direct shear waves. <i>Physics of the Earth and Planetary Interiors</i> , <b>2016</b> , 261, 141-151	2.3	14
66	Crustal structure and kinematics of the TAMMAR propagating rift system on the Mid-Atlantic Ridge from seismic refraction and satellite altimetry gravity. <i>Geophysical Journal International</i> , <b>2016</b> , 206, 1382-1397	2.6	4
65	Applicability and Bias of VP/VSEstimates byPandSDifferential Arrival Times of Spatially Clustered Earthquakes. <i>Bulletin of the Seismological Society of America</i> , <b>2016</b> , 106, 1055-1063	2.3	3
64	Field observations of seismic velocity changes caused by shaking-induced damage and healing due to mesoscopic nonlinearity. <i>Geophysical Journal International</i> , <b>2016</b> , 204, 1490-1502	2.6	30
63	Deep India meets deep Asia: Lithospheric indentation, delamination and break-off under Pamir and Hindu Kush (Central Asia). <i>Earth and Planetary Science Letters</i> , <b>2016</b> , 435, 171-184	5.3	107
62	The 2015 Illapel earthquake, central Chile: A type case for a characteristic earthquake?. <i>Geophysical Research Letters</i> , <b>2016</b> , 43, 574-583	4.9	93
61	Seismic anisotropy of the lithosphere and asthenosphere beneath southern Madagascar from teleseismic shear wave splitting analysis and waveform modeling. <i>Journal of Geophysical Research: Solid Earth</i> , <b>2016</b> , 121, 6627-6643	3.6	18
60	Systematic Changes of Earthquake Rupture with Depth: A Case Study from the 2010Mw8.8 Maule, Chile, Earthquake Aftershock Sequence. <i>Bulletin of the Seismological Society of America</i> , <b>2015</b> , 105, 2468-2479	2.3	6
59	Upper-mantleP- andS-wave velocities across the Northern Tornquist Zone from traveltome tomography. <i>Geophysical Journal International</i> , <b>2015</b> , 203, 437-458	2.6	9
58	Depth-variant azimuthal anisotropy in Tibet revealed by surface wave tomography. <i>Geophysical Research Letters</i> , <b>2015</b> , 42, 4326-4334	4.9	37
57	Thickness of the lithosphere beneath Turkey and surroundings from S-receiver functions. <i>Solid Earth</i> , <b>2015</b> , 6, 971-984	3.3	64

56	Comparison of postseismic afterslip models with aftershock seismicity for three subduction-zone earthquakes: Nias 2005, Maule 2010 and Tohoku 2011. <i>Geophysical Journal International</i> , <b>2014</b> , 199, 784-799	2.6	22
55	Splay fault activity revealed by aftershocks of the 2010 Mw 8.8 Maule earthquake, central Chile. <i>Geology</i> , <b>2014</b> , 42, 823-826	5	26
54	Gradual unlocking of plate boundary controlled initiation of the 2014 Iquique earthquake. <i>Nature</i> , <b>2014</b> , 512, 299-302	50.4	211
53	A 3D shear-wave velocity model of the upper mantle beneath China and the surrounding areas. <i>Tectonophysics</i> , <b>2014</b> , 633, 193-210	3.1	32
52	Advancing Subduction Zone Science After a Big Quake. <i>Eos</i> , <b>2014</b> , 95, 193-194	1.5	6
51	Imaging the lithosphere beneath NE Tibet: teleseismic P and S body wave tomography incorporating surface wave starting models. <i>Geophysical Journal International</i> , <b>2014</b> , 196, 1724-1741	2.6	25
50	High-frequency seismic radiation from Maule earthquake (Mw 8.8, 2010 February 27) inferred from high-resolution backprojection analysis. <i>Geophysical Journal International</i> , <b>2014</b> , 199, 1058-1077	2.6	12
49	The Use of Direct Shear Waves in Quantifying Seismic Anisotropy: Exploiting Regional Arrays. <i>Bulletin of the Seismological Society of America</i> , <b>2014</b> , 104, 2644-2661	2.3	12
48	A high-resolution, time-variable afterslip model for the 2010 Maule Mw = 8.8, Chile megathrust earthquake. <i>Earth and Planetary Science Letters</i> , <b>2013</b> , 383, 26-36	5.3	71
47	Scandinavia: A former Tibet?. <i>Geochemistry, Geophysics, Geosystems</i> , <b>2013</b> , 14, 4479-4487	3.6	22
46	Seismic Anisotropy from SKS Splitting beneath Northeastern Tibet. <i>Bulletin of the Seismological Society of America</i> , <b>2013</b> , 103, 3362-3371	2.3	18
45	Subduction system variability across the segment boundary of the 2004/2005 Sumatra megathrust earthquakes. <i>Earth and Planetary Science Letters</i> , <b>2013</b> , 365, 108-119	5.3	13
44	Ambient-noise tomography of north Tibet limits geological terrane signature to upper-middle crust. <i>Geophysical Research Letters</i> , <b>2013</b> , 40, 808-813	4.9	15
43	Coalescence microseismic mapping. <i>Geophysical Journal International</i> , <b>2013</b> , 195, 1773-1785	2.6	79
42	3-D active source tomography around Simeulue Island offshore Sumatra: Thick crustal zone responsible for earthquake segment boundary. <i>Geophysical Research Letters</i> , <b>2013</b> , 40, 48-53	4.9	13
41	Seismic evidence for stratification in composition and anisotropic fabric within the thick lithosphere of Kalahari Craton. <i>Geochemistry, Geophysics, Geosystems</i> , <b>2013</b> , 14, 5393-5412	3.6	73
40	Seismic anisotropy in the Sumatra subduction zone. <i>Journal of Geophysical Research: Solid Earth</i> , <b>2013</b> , 118, 5372-5390	3.6	22
39	Shear velocity structure across the Sumatran Forearc-Arc. <i>Geophysical Journal International</i> , <b>2012</b> , 189, 1306-1314	2.6	17

38	Crustal structure of the British Isles and its epeirogenic consequences. <i>Geophysical Journal International</i> , <b>2012</b> , 190, 705-725	2.6	33
37	Aftershock seismicity of the 27 February 2010 Mw 8.8 Maule earthquake rupture zone. <i>Earth and Planetary Science Letters</i> , <b>2012</b> , 317-318, 413-425	5.3	69
36	A complex Tibetan upper mantle: A fragmented Indian slab and no south-verging subduction of Eurasian lithosphere. <i>Earth and Planetary Science Letters</i> , <b>2012</b> , 333-334, 101-111	5.3	91
35	Infragravity wave source regions determined from ambient noise correlation. <i>Geophysical Research Letters</i> , <b>2012</b> , 39, n/a-n/a	4.9	13
34	The structure of the Sumatran Fault revealed by local seismicity. <i>Geophysical Research Letters</i> , <b>2012</b> , 39, n/a-n/a	4.9	20
33	Structure and seismogenic properties of the Mentawai segment of the Sumatra subduction zone revealed by local earthquake traveltimes tomography. <i>Journal of Geophysical Research</i> , <b>2012</b> , 117, n/a-n/a		53
32	Significant and vertically coherent seismic anisotropy beneath eastern Tibet. <i>Journal of Geophysical Research</i> , <b>2012</b> , 117, n/a-n/a		37
31	Fragmented Indian plate and vertically coherent deformation beneath eastern Tibet. <i>Journal of Geophysical Research</i> , <b>2012</b> , 117, n/a-n/a		33
30	Tibetan plate overriding the Asian plate in central and northern Tibet. <i>Nature Geoscience</i> , <b>2011</b> , 4, 870-873	18.3	164
29	Application of the Multichannel Wiener Filter to Regional Event Detection Using NORSAR Seismic-Array Data. <i>Bulletin of the Seismological Society of America</i> , <b>2011</b> , 101, 2887-2896	2.3	5
28	Crustal structure of a rifted oceanic core complex and its conjugate side at the MAR at 5°S: implications for melt extraction during detachment faulting and core complex formation. <i>Geophysical Journal International</i> , <b>2010</b> , 181, 113-126	2.6	14
27	The updip seismic/aseismic transition of the Sumatra megathrust illuminated by aftershocks of the 2004 Aceh-Andaman and 2005 Nias events. <i>Geophysical Journal International</i> , <b>2010</b> ,	2.6	22
26	The September 2009 Padang earthquake. <i>Nature Geoscience</i> , <b>2010</b> , 3, 70-71	18.3	52
25	Exploring Structural Controls on Sumatran Earthquakes. <i>Eos</i> , <b>2010</b> , 91, 405	1.5	5
24	Rayleigh wave phase velocity maps of Tibet and the surrounding regions from ambient seismic noise tomography. <i>Geochemistry, Geophysics, Geosystems</i> , <b>2010</b> , 11, n/a-n/a	3.6	85
23	The Fine Structure of the Subducted Investigator Fracture Zone in Western Sumatra as Seen by Local Seismicity. <i>Earth and Planetary Science Letters</i> , <b>2010</b> , 298, 47-56	5.3	45
22	Subducted seafloor relief stops rupture in South American great earthquakes: Implications for rupture behaviour in the 2010 Maule, Chile earthquake. <i>Earth and Planetary Science Letters</i> , <b>2010</b> , 298, 89-94	5.3	52
21	Relationship between the upper mantle high velocity seismic lid and the continental lithosphere. <i>Lithos</i> , <b>2009</b> , 109, 112-124	2.9	44

20	Application of frequency-dependent multichannel Wiener filters to detect events in 2D three-component seismometer arrays. <i>Geophysics</i> , <b>2009</b> , 74, V133-V141	3.1	6
19	Editorial Submarine geomorphology: new views on an "Invisible" landscape. <i>Basin Research</i> , <b>2008</b> , 20, 467-472	3.2	5
18	Seismology Across the Northeastern Edge of the Tibetan Plateau. <i>Eos</i> , <b>2008</b> , 89, 487-487	1.5	12
17	Constraints on crustal and mantle structure of the oceanic plate south of Iceland from ocean bottom recorded Rayleigh waves. <i>Tectonophysics</i> , <b>2008</b> , 447, 66-79	3.1	12
16	Seismicity in the outer rise offshore southern Chile: Indication of fluid effects in crust and mantle. <i>Earth and Planetary Science Letters</i> , <b>2008</b> , 269, 41-55	5.3	31
15	Application of multichannel Wiener filters to the suppression of ambient seismic noise in passive seismic arrays. <i>The Leading Edge</i> , <b>2008</b> , 27, 232-238	1	11
14	Seismicity and geometry of the south Chilean subduction zone (41.5°S-43.5°S): Implications for controlling parameters. <i>Geophysical Research Letters</i> , <b>2007</b> , 34,	4.9	47
13	Seismic Broadband Ocean-Bottom Data and Noise Observed with Free-Fall Stations: Experiences from Long-Term Deployments in the North Atlantic and the Tyrrhenian Sea. <i>Bulletin of the Seismological Society of America</i> , <b>2006</b> , 96, 647-664	2.3	25
12	Microearthquake seismicity of the Mid-Atlantic Ridge at 5°S: A view of tectonic extension. <i>Journal of Geophysical Research</i> , <b>2004</b> , 109,		27
11	About the lithospheric structure of central Tibet, based on seismic data from the INDEPTH III profile. <i>Tectonophysics</i> , <b>2004</b> , 380, 1-25	3.1	47
10	Crustal structure of northern and southern Tibet from surface wave dispersion analysis. <i>Journal of Geophysical Research</i> , <b>2003</b> , 108,		85
9	Shear wave splitting and mantle flow beneath LA RISTRA. <i>Geophysical Research Letters</i> , <b>2003</b> , 30,	4.9	20
8	Seismic imaging of the downwelling Indian lithosphere beneath central Tibet. <i>Science</i> , <b>2003</b> , 300, 1424-733,3		258
7	P-wave velocity structure of the uppermost mantle beneath Hawaii from traveltimes tomography. <i>Geophysical Journal International</i> , <b>2001</b> , 146, 594-606	2.6	34
6	Mapping the Hawaiian plume conduit with converted seismic waves. <i>Nature</i> , <b>2000</b> , 405, 938-41	50.4	157
5	Seismic polarization anisotropy beneath the central Tibetan Plateau. <i>Journal of Geophysical Research</i> , <b>2000</b> , 105, 27979-27989		161
4	Shear-wave structure of the lithosphere above the Hawaiian Hot Spot from two-station Rayleigh wave phase velocity measurements. <i>Geophysical Research Letters</i> , <b>1999</b> , 26, 1493-1496	4.9	50
3	P and S wave scattering from mantle plumes. <i>Journal of Geophysical Research</i> , <b>1998</b> , 103, 21145-21163		9

2	Thickness of the lithosphere beneath Turkey and surroundings from S-receiver functions	3
1	SeisBench - A Toolbox for Machine Learning in Seismology	2